Primary Care and Public Health

Barbara Starfield, MD, MPH

Primary Care Course
(Based on Cape Town, South Africa, 2007;
and Barcelona, Spain, 2009)

This presentation presents the difference between care of patients (Primary Care) and the care of populations (Public Health) The differences are becoming blurred over time, and the roles differ from place to place, as shown in a study carried out in eight different countries.

Public Health

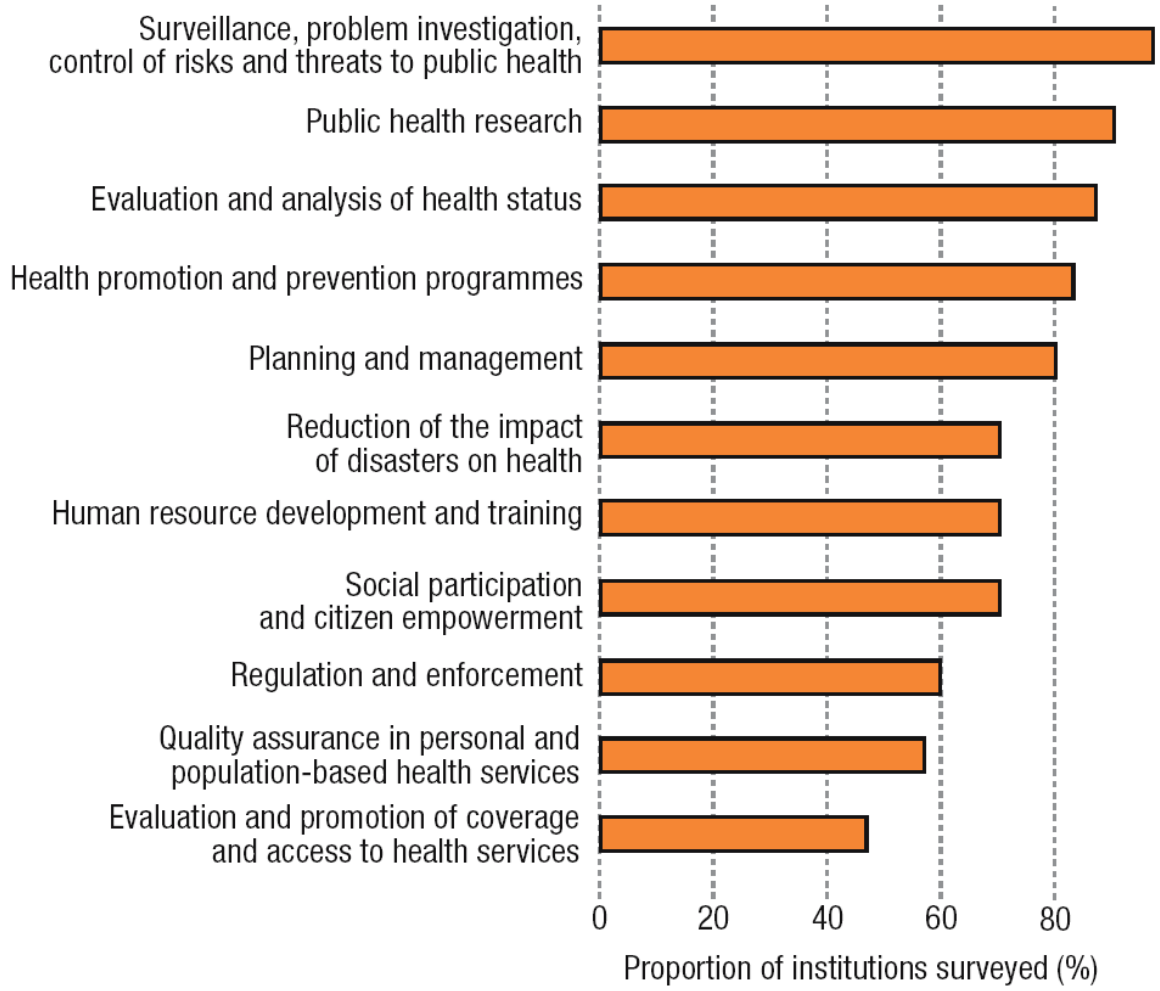
"Organized community efforts aimed at the prevention of disease and the promotion of health"

Source: Holland & Knox. Oxford Textbook of Public Health, 2nd ed. Vol. 1: Influences of Public Health. Oxford U. Press, 1991.

Role of Public Health

1. Provide resources
2. Assess population needs
3. Develop policy for linking levels of care
4. Assure effectiveness, efficiency, equity

Essential Public Health Functions That 30 National Public Health Institutions View as Being Part of Their Portfolio



Source: Binder et al, J Public Health Policy 2008;29:3-21.

Starfield 05/09
PH 7233 n

Core Functions of Public Health, IOM 1988

Assessment of health status

Development of public health policy by promoting the use of scientific decision-making about public health

Assuring constituents that necessary services are provided and involving key policy makers in determining a set of high priority personal and community-wide health services

Core Responsibilities

PUBLIC HEALTH

- Prevent spread of disease
- Protect against environmental hazards
- Promote healthy behaviors and mental health
- Respond to disasters

etc. (n=16, none of which involve providing health services to individuals)

[This list is similar to WHO Delphi survey - Bettcher et al, World Health Stat Q 1998; 51(1):44-54.]

Source: Statement, Public Health Functions Steering Committee (US), 1994.

Core Responsibilities

CLINICAL MEDICINE

- Prevent disease in individuals
- Treat disease in individuals
  - Cure
  - Minimize disability
  - Prevent progression

Public Health Usually Assumes Responsibility for

- Non-personal health services
- Personal health services where
  - populations are threatened
  - clinical care has not yet adapted to recognizing and addressing population health needs

Synergies between Public and Clinical Medicine

- Services: coordinating care for individuals
- Access: establishing frameworks to provide services for the uninsured.
- Quality: applying a population perspective to medical practice
- Using clinical practice to identify and address community health problems
- Mobilizing community campaigns for health promotion/protection
- Collaborating around policy, training, and research

Source: Lasker R, Committee on Medicine and Public Health. Medicine and Public Health: The Power of Collaboration. New York Academy of Medicine, 1997.

Types of Interventions

Target group	A. Health protection, promotion, avoiding risk (1º)	B. Early detection (2º)	C. Remediation (3º & 4º)
Generalized			
Populations*			
Individuals			
Selective			
Indicated			

*or all people of a given age

Types of Interventions

Target group	A. Health protection, promotion, avoiding risk (1º)	B. Early detection (2º)	C. Remediation (3º & 4º)
Generalized			
Populations*	PH	PH	PH (PC)
Individuals	PH/PC	PH/PC	PH/PC
Selective	?	PC/PH	PC/PH
Indicated	PC/PH	PC/PH	PC (PH)

*or all people of a given age

Types of Interventions

Target group	Primary	Secondary	Tertiary & Quaternary
Generalized			
Populations	Environmental planning	Environmental monitoring and product control	Public advocacy Community mobiliza-tion (legal and social remedy)
Individuals	Health education campaigns Immunizations	PKU screening Breast cancer screening	Information systems: data standardization, collection, analysis and dissemination
Selective	Genetic engineering	Blood lead screening	Outreach/access, e.g., home visiting
Indicated	Communicable disease control Prophylactic antibiotics Practice guidelines	Frequent follow-up for disease recurrence	Address problems: quality assessment of clinical services, including adverse events

Types of Interventions

Target group	A. Health protection, promotion, avoiding risk (1º)	B. Early detection (2º)	C. Remedi-ation (3º & 4º)*
Population			
As population**			
All individuals			
Selective			
Indicated			

*includes remediation and/or retardation of progression as well as avoidance of harm (quaternary prevention)

**or all people of a given age

Starfield 07/07
LINK 5350 bn

Types of Interventions

Target group	A. Health protection, promotion, avoiding risk (1º)	B. Early detection (2º)	C. Remedi-ation (3º & 4º)
Population			
As population*	PH	PH	PH (PC)
All individuals	PH/PC	PH/PC	PH/PC
Selective	?	PC/PH	PC/PH
Indicated	PC/PH	PC/PH	PC (PH)

*or all people of a given age

Starfield 07/07
LINK 5349 bn

Types of Interventions

Target group	Primary	Secondary	Tertiary & Quaternary
Population			
As population	Environmental planning	Environmental monitoring and product control	Public advocacy Community mobilization (legal and social remedy)
All individuals	Health education campaigns Immunizations	PKU screening Breast cancer screening	Information systems: data standardization, collection, analysis and dissemination
Selective	Genetic engineering	Blood lead screening	Outreach/access, e.g., home visiting
Indicated	Communicable disease control Prophylactic antibiotics Practice guidelines	Frequent follow-up for disease recurrence	Address problems: quality assessment of clinical services, including adverse events

Levels and Types of Interventions to Improve Health*

	Societal (population) level	**Individual level**
Physical environment	Environmental planning, monitoring, regulation	Responsible use of environmental resources
Social environment	Public advocacy, community mobilization	Promotion of solidarity
Health services environment	Resource mobilization/deployment	Early recognition of problems regardless of their genesis
	Information systems: collection, analysis, and dissemination for early identification of problems and iatrogenesis	
Personal environment	Genetic engineering	Responsible stewardship of one's health

*Locus of responsibility may vary from one jurisdiction to another but must be explicit and with accountability.

Source: Sheridan et al, Am J Prev Med 2004;26:56-66.

Where the risk factor is to be avoided or managed in particularly vulnerable individuals (e.g., those with compromised resilience) rather than in defined population subgroups, the responsibility lies with clinical care.

The challenge is to decide the appropriate locus of responsibility if the risk factor is to be avoided or managed in the general population or in selected subgroups of the population.

The Reality

Survey of Locus of Responsibility for Selected Preventive Services: 2001

Jurisdictions for Survey

Belgium (B)

Canada: Quebec (Q)

Norway (N)

Spain: Andalucia (A), Asturias (S), Madrid (M)

UK (U)

US: Illinois (I)

Hypothesis

Extent to which services directed at individuals in populations are carried out by public health depends on the degree to which primary care services are responsible for defined populations.

Corollary

Countries such as the UK and Denmark, with defined populations in primary care, would be expected to have more of these services in the primary care sector.

Corollary

In countries where primary care services are not directed at populations, provision of population-focused services (such as immunizations) in the primary care sector signifies inadequate public health services.

Interventions by Target Group

Likely target	Interventions
All individuals (age/gender appropriate)	Influenza immunization Childhood immunizations PKU screening
Sociodemographically indicated (selected subpopulations)	Breast cancer screening Hypertension screening TBC screening HIV screening Osteoporosis screening
Individually indicated	

Starfield 07/07
LINK 5774

Procedures for Hypertension

Target (All=$3^{U,M,I}$, Sel=$2^{A,S}$, Indiv=$3^{Q,B,N}$)

	Policy	Contact	F/U	Records
Govt/HA	$4^{U,A,S,M}$	0	0	0
Profes-sional	$3^{Q,I,N}$	0	0	0
Primary care	0	$6^{U,A,M,S,I,N}$	$8^{Q,U,B,A,M,S,I,N}$	$7^{U,B,A,M,S,I,N}$
Hosp only	0	0	0	0
Variable/ none	1^{B}	$2^{B,Q}$	0	1^{Q}

Starfield 10/01
LINK 5778 a

Procedures for Mammography

Target (All=8)

	Policy	Contact	F/U	Records
Govt/HA	8	$3^{Q,B,N}$	0	0
Primary care	0	$4^{U,M,S,I}$	$3^{B,I,N}$	$3^{B,M,N}$
Hosp only	0	1^{A}	$4^{U,A,M,S}$	$3^{U,A,S}$
Variable/ none	0	0	1^{Q}	$2^{Q,I}$

Starfield 10/01
LINK 5779 a

Procedures for PKU

Target (All=8)

	Policy	Contact	F/U	Records
Govt/HA	8	$2^{B,A}$	0	0
Primary care	0	$3^{U,S,N}$	0	$4^{B,M,N}$
Hosp only	0	$3^{Q,M,I}$	$7^{Q,U,B,A,M,S,N}$	$4^{Q,U,A,S}$
Variable/ none	0	0	1^{I}	1^{I}

Starfield 10/01
LINK 5780 a

Procedures for TBC

Target (All=1^{N}, Sel=$2^{Q,I}$, Indiv=$5^{U,B,A,M,S}$)

	Policy	Contact	F/U	Records
Govt/HA	$7^{Q,U,B,S,I,N,M}$	1^{N}	0	1^{N}
Primary care	0	$6^{B,Q,U,M,S,I}$	$4^{U,B,M,S}$	$5^{U,B,M,S,I}$
Hosp only	1^{A}	1^{A}	$2^{A,N}$	1^{A}
Variable/ none	0	0	$2^{Q,I}$	1^{Q}

Procedures for Flu

Target (All=$7^{B,Q,U,A,M,S,I}$, Sel=0, Indiv=1^{N})

	Policy	Contact
Govt/HA	$5^{Q,U,M,S,A}$	0
Profes-sional	$3^{B,I,N}$	0
Primary care	0	$8^{B,Q,U,A,M,S,I,N}$
Hosp only	0	0
Variable/ none	0	0

Procedures for HIV

Target (All=0, Sel=$2^{Q,U}$, Indiv=$6^{B,A,S,I,N,M}$)

	Policy	Contact	F/U	Records
Govt/HA	$5^{Q,U,M,I,N}$	0	0	0
Profes-sional	0	0	0	0
Primary care	0	$4^{U,M,I,N}$	1^{B}	$4^{B,U,M,I}$
Hosp only	$2^{A,S}$	$2^{A,S}$	$5^{A,M,S,N,U}$	$3^{A,S,N}$
Variable/ none	1^{B}	$2^{B,Q}$	$2^{I,Q}$	1^{Q}

Starfield 10/01
LINK 5783

Procedures for Immuniz

Target (All=$8^{B,Q,U,A,M,S,I,N}$, Sel=0, Indiv=0)

	Policy	Contact
Govt/HA	$8^{B,Q,U,M,S,I,N,A}$	0
Profes-sional	0	0
Primary care	0	$8^{B,Q,U,A,M,S,I,N}$
Hosp only	0	0
Variable/ none	0	0

Starfield 10/01
LINK 5784 a

Procedures for Osteoporosis

Target (All=3^{A,S,I}, Sel=0, Indiv=5^{B,Q,U,N,M})

	Policy	Contact	F/U	Records
Govt/HA	1^{M}	0	0	0
Profes-sional	2^{Q,I}	0	0	0
Primary care	0	6^{B,A,M,S,I,N}	5^{B,A,S,I,N}	5^{B,A,M,S,N}
Hosp only	3^{A,S,N}	0	1^{M}	0
Variable/ none	2^{B,U}	2^{Q,U}	2^{Q,U}	3^{Q,U,I}

Starfield 10/01
LINK 5785 a

Target and type of challenge	Interventions	Variability
Target all, single influence	Flu immuniza-tion (7/8)	No variability (contact)
	Immunizations	No variability (contact)
	PKU screening	Variability in contact and records but not f/u (7/8)

Target and type of challenge	Interventions	Variability
Target all, multiple influences	Mammography	Variability in contact, f/u, records

Target and type of challenge	Interventions	Variability
Target selective single influence	none included in survey	-

Target and type of challenge	Interventions	Variability
Target selective multiple influences	Hypertension screening	No variability in f/u; little variability in contact, records (7/8)
	Osteoporosis screening	Variability in contact, f/u, records
	TBC screening	Variability in contact, f/u, records

Loci of Prevention

In a survey of conventional preventive activities in 8 areas of 6 countries, there was no consensus

- on whether services are targeted at populations, particular population subgroups, or individuals
- on the locus of activity for policy development, procedures for contact or follow-up, or record keeping, particularly for the problematic groups of ALL INDIVIDUALS in the population and SELECTED INDIVIDUALS in the population

Potential Solutions: All Joint Efforts of Public Health/Primary Care

1. Set goals
2. Coordinate planning and development of health information systems
3. Conduct surveys: needs, access, use, adequacy (e.g., PCAT)
4. Enhance monitoring function: needs, access, use, adequacy
5. Evaluate results
   - Change in health needs
   - Effectiveness of service
   - Attainment of equity in services; in health

Potential Solutions: All in Clinical Settings

6. Rostering the community
7. Public health personnel working as integrated but separate division
8. Public health personnel delivering services, especially those in levels 2 and 3 (to individuals in entire population, individuals in selected subpopulations)
9. Monitoring the adequacy of person-focused, i.e., primary care services (PCAT), and back-up specialty services (as needed)

The role of public policies in prevention is to assure a health-adding environment (which benefits everyone). It may also have a role in preventive activities that apply to everyone or, in cases where clinical services do not do it, to population groups at social disadvantage.

As primary care changes to care for defined populations through organized societal efforts, its overlap with public health will become greater. As that happens, their relative roles must become clearer, with public health having the responsibility for interventions directed at whole populations and for problems that are so common that it is not efficient to do them individual by individual in clinical practice. Whether or not market-oriented health systems can do this is an open question.

“Swine Flu: Public Health Has Become a Public Nuisance”

“The moralising propaganda of public health has a generally demoralising effect on society – encouraging fear and anxiety – and attendant sentiments of stigma and blame. It has a degrading effect on medical practice and is corrosive of good relationships between doctors and patients. As the swine flu scare confirms, it is also disruptive of day-to-day medical practice.”

Source: Fitzpatrick, Br J Gen Pract 2009;59:615.

- Primary care is neither public health nor prevention.
- Primary care is an approach to delivering services that maximizes effectiveness, efficiency, and equity in health.
- Clinical “primary care” will never assume all of the functions of public health because the stewardship, leadership, and other system functions have to be assumed by a publicly accountable body.
- Clinical primary care should not assume the burden of prevention, because the genesis of illness lies far beyond the health system. The best it can hope to do is assure that the portion it assumes is more effective, more efficient, and more equitable than can be done by public health and intersectoral efforts. This is increasingly proving not to be the case, especially in countries with weak primary care.